

Freight Optimization and Development on Missouri's Ports and Waterways

Transporting freight has economic importance on both a national and international scale, and waterborne freight traffic is projected to grow nationwide. To capture this growth, it is necessary to inventory Missouri's existing waterway operations and infrastructure and determine how Missouri can set the stage to strengthen its role as a national freight center. TranSystems' study for the Missouri Department of Transportation (MoDOT) reflects current and projected commodity movements, reviews port infrastructure and resource needs, and discusses strategies that Missouri could adopt to increase the state's role in freight movements. Provided here is a summary of the Freight Optimization and Development on Missouri's Ports and Waterways study.

Overview of Missouri's Inland Waterway Network

Missouri borders 488 miles of the Mississippi River and 186 miles of the Missouri River.

A total of 14 public ports and over 200 private ports can be found along Missouri's waterways. Three public and more than 50 private ports are on the Missouri River; 11 public and over 150 private ports are on the Mississippi River.

The 14 public Port Authorities in Missouri occupy roughly 2,000 acres of land and currently report service to 36 counties and six other states.

Annual statewide shipments of commodities on Missouri's river network were valued at approximately \$2 billion in 2006.

According to a 2007 survey given by MoDOT, many of the state's ports had supply-based needs of new port construction, existing port construction/improvements, improving transportation connections and providing better support facilities.



Missouri's centralized location and access to multiple modes of transportation effectively position the state for increased freight movements and growth on its waterways. Other valuable advantages to encourage waterborne commerce on Missouri's ports and waterways network include: existing land for port expansion, available skilled labor force, favorable business climate and its impact on economic development, Foreign Trade Zones, Enhanced Enterprise Zones and lack of congestion currently on the waterways.

Ports and Waterways Trends and Outlook

Commodities on the Waterway System

► Mining crude materials and minerals generates \$4.5-\$5 billion toward Missouri's economy annually. Missouri's population is estimated to grow 15% over the next 20 years. Given this growth, there will be a continued demand to ship these commodities via barge as it is a cost effective mode of transport.

International Freight Movements

► In 2004, the reported value of U.S.-international trade by mode was 39.3% water, 26.8% air, 21.4% truck, 4.9% rail and 1.2% pipeline. Clearly, coastal and river ports play an important role in the current modal split for global trade and this is likely to strengthen in the next decade. The use of inland waterways to ship goods further inland is important as many Gulf coast ports are positioned to accept an increased number of containers due to trade growth from China and the expansion of the Panama Canal.

Container-On-Barge (COB)

► Global containership capacity has nearly tripled in the last decade and it is estimated to grow another 50% in the next five years.
► To handle COB service, port terminals must have adequate ground storage and equipment to move containers on/off vessels and truck chassis. The lock and dam operation also needs to be reliable for timely shipments.

Biofuel Industry

► U.S. ethanol production reached 4.86 billion gallons in 2006, compared to 1.63 billion gallons in 2000. USDA forecasts a rapid increase in ethanol production over the next 5 years to over 11 billion gallons.
► The projected growth of ethanol and other biofuels is expected to have a positive impact on tank barge demand; dry distillers grains could have a positive impact on dry hopper barge demand.

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Strategies for Missouri

Strategies have been developed to increase Missouri's role in waterborne freight movements and accelerate or facilitate freight and logistics development at the state's ports. These strategies have considered research data and other information gathered on Missouri's ports and waterways network, including industry and commodity trends, and input from key stakeholders.

Preserve and enhance Missouri's ports and waterways system to ensure mobility and reliability.

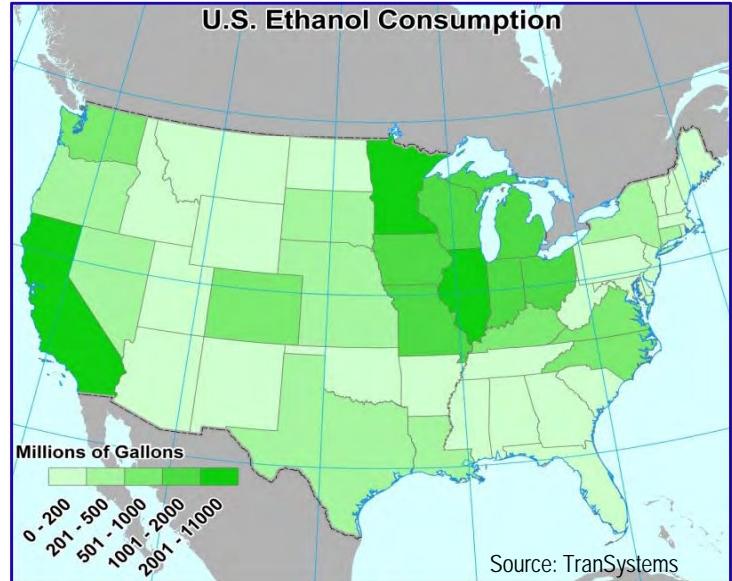
- ▶ Complete intermodal connections giving priority to ports with incomplete connections like New Madrid and Pemiscot.
- ▶ Support the Water Resources Development Act appropriations in Congress to modernize the lock and dam system on the Upper Mississippi River.
- ▶ Utilize the proposed Waterways Prioritization Process to determine optimal investments that meet the needs of Missouri's ports.

Promote the health of existing commodities shipped on the waterway system.

- ▶ Leverage involvement in the Industrial Minerals Advisory Council to monitor commodity projections and protect interests of Missouri's ports.
- ▶ Investigate opportunities to serve on advocacy groups to support Port interests for other waterway commodities.

Pursue additional funding to implement projects that support freight development.

- ▶ Evaluate the current and future economic impact of the ports on the state system to provide additional support for annual funding.
- ▶ Pursue a dedicated funding source for waterways.
- ▶ Maintain the ability to use flexible funding mechanisms at ports regardless of its floodplain designation.
- ▶ Establish a Multimodal Council to promote all modes in Missouri and raise awareness of the need for adequate funding.



Today, the center of ethanol production is in Iowa, Kansas, Nebraska, South Dakota and Minnesota – all points are accessible to Missouri via the inland waterway system. Ethanol consumption is also high in many states that are accessible via Missouri's inland rivers like Illinois, Minnesota and Iowa.

Support sound initiatives to capture new commodities and service opportunities for Missouri.

- ▶ Support or conduct a feasibility study for a biofuel consolidation and distribution facility.
- ▶ Evaluate and consider proposals to support the development of a Logistics Terminal near large production and consumption areas.
- ▶ Participate in a Public/Private Partnership (P3) to capture new commodities or service options at Missouri ports.